

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application No.: 10/334,137  
Applicant: MURDIN, Andrew D. et al.  
Filed: December 31, 2002  
TC/A.U.: 1645  
Examiner: Nita M. Minnifield

Docket No: 032931/0261

Commissioner for Patents  
P.O. Box 1450  
Washington, D.C. 20231

**DECLARATION PURSUANT TO 37 CFR § 1.132**

I, Andrew Murdin, Director, External R&D Canada, Aventis Pasteur, hereby declare that:

1. Details of my employment history are as follows:

**Since 2002** Director, External R&D Canada, Aventis Pasteur.

**1999 - 2002** Principal Research Scientist, Aventis Pasteur.

**1997 - 2002** Section Head, Aventis Pasteur

**1993 - 2003** Project Leader (Chlamydia), Aventis Pasteur

**1990 - 1993** Research Scientist, Connaught Laboratories Ltd. (subsequently Pasteur Merieux Connaught, subsequently Aventis Pasteur), Toronto, Canada

**1988 to 1990** - Post-Doctoral Research Associate, Dept. of Microbiology, State University of New York, Stony Brook, NY, USA.

**1985 to 1987** - Post-Doctoral Research Fellow, Dept. of Microbiology, University of Surrey, Guildford, Surrey, England.

**1981 to 1985** - Scientific Officer, Vaccine Research Dept., Animal Virus Research Institute, Pirbright, Surrey, England.

2. Details of my education are as follows:

B.Sc., University of Bath, England, 1980

Ph.D., University of Surrey, England, 1986

3. I have reviewed U.S. patent No. 6,559,294 to Griffais et al. ("Griffais"), which is cited in the Office Action mailed September 11, 2003.

4. Griffais sequenced the *C. pneumoniae* genome and identified 1296 putative open reading frames (see Table 1 of Griffais).

5. Griffais says any of the 1296 open reading frames can be used to make a vaccine. This is incorrect as discussed below.

6. Experiments conducted by the assignee Aventis Pasteur Limited demonstrate that only a few of the 1296 open reading frames can be used as vaccines.

7. Thirty six *C. pneumoniae* open reading frames coding for outer membrane proteins were tested for their ability to protect against *C. pneumoniae* infection in the *in vivo* mouse model. The attached Summary of Protective Results specifies:

- which construct was used for immunization. The constructs were made essentially as described in Examples 1 and 2 of the specification;
- which of Griffais' SEQ ID NOs correspond to the sequences in the construct, and
- whether these sequences confer protection. Testing of the constructs for immuno-protection was performed as described in Example 3 of the specification.

8. The attached Raw Biologic Data show the raw data (bacterial load per lung) in each experiment. The experiments were performed as described in Example 3 of the specification.

9. As is clear from the Summary of Protective Results and the Raw Biologic Data, of the 36 *C. pneumoniae* ORFs tested, only 8 (i.e. 22%) provided a protective effect.

10. These results confirm that Griffais is incorrect in stating that any of the 1296 open reading frames can be used in a vaccine.

11. I hereby declare that all statements made herein of my knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

February 11<sup>th</sup> 2004

Date

A handwritten signature in black ink, appearing to read 'Andrew Murdin', written over a horizontal line.

Andrew Murdin,

Director, External R&D Canada

# SUMMARY OF PROTECTIVE RESULTS

Plasmid-ID	Hit Description/Comment	corresponding SEQ ID No from WO99/27105	PROTECTIVE Yes/No	Tested in Screens/Group	WILCOXON "p" value (vs SALINE/PBS immunized-group B-on day 9, unless otherwise noted)
pCAI877	pmp1; putative 98 kDa outer membrane protein; CP 036	15	NO	S8 -group E	day 5-0.7302
					day 9-0.9048
pCAI397	pmp2; putative 98 kDa outer membrane protein; CP 017	25	NO	S3 -group E	day 5-0.5714
					day 9-0.3929
pCAI396	CP 014	28	YES	S4 -group F	S4-day 5-1.75
					S4-day 9-1.75
				S47 -group H	S47-0.007992
pCAI395	pmp4; putative 98 kDa outer membrane protein; CP 013	31/32	NO	S4 -group E	day 5-0.7857
					day 9-1.214
pCAI394	pmp5; putative 98 kDa outer membrane protein; CP 012	33/35	NO	S4 -group D	day 5-0.5714
					day 9-1.429
pCACPNM 200	IncA; inclusion membrane protein	201	NO	S34 -group D	0.2844

--	--	--	--	--	--

pCAI314	outer membrane protein; CP 008; Incyte 314	291	NO	S2 -group E	S2-day 5-0.7857
				S52 -group E	S2-day 9-0.7857
					S52-1.338
pCAI114	inclusion membrane protein B	304	NO	S17 -group D	0.7546
pCAI115	inclusion membrane protein C; CP 011	305	YES	S10 -group D	S10-day 5-0.03175
				S56 -group K	S10-day 9-0.9048
					S56-0.4136
pCAI111	outer membrane protein Omp85; CP 015	314	NO	S7 -group D	0.7302
pCABk319	OmpH-like outer membrane protein	315	NO	S32 -group H	S32-0.04262
				S47 -group I	S47-0.2284
pCAI368	pmp 6; putative 98 kDa outer membrane protein	466	NO	S17 -group I	1.655
pCAI640	pmp 7; putative 98 kDa outer membrane protein; CP 032	468	NO	S9 -group G	S9-day 5-0.03175
				S56 -group F	S9-day 9-0.9048
					S56-1.665

pCAI639	pmp 8; putative 98 kDa outer membrane protein; CP 031	470	NO	S7 -group F	d9 only-0.9048
pCAI638	pmp 9; putative 98 kDa outer membrane protein; CP 030	472	NO	S41 -group D	S41-0.0293
				S56 -group G	S56-1.338
pCAI635	pmp 10; putative 98 kDa outer membrane protein; CP 029	477	NO	S38 -group I	S38-0.01998
				S57 -group H	S57-0.1812
pCAI634	pmp 11; putative 98 kDa outer membrane protein; CP 028	478	NO	S9 -group F	day 5-0.4127
					day 9-1.27
pCAI633	pmp 12; putative 98 kDa outer membrane protein	479	NO		
pCAI632	POMP91B precursor	480/482	NO	S10 -group G	S10-day 5-0.01587
					S10-day 9-0.5556
				S45 group H	S45-1.655
				S53 -group H	S53-0.1375
pCAI630	POMP91A	485	NO	S10 -group F	day 5-0.1111
					day 9-0.4127
pCAI628	putative 98 kDa outer membrane protein; CP 027	500	NO	S9 -group E	day 5-0.5556
					day 9-0.25

pCAI626	POMP90B precursor	500/501	NO		



pCAI624	putative 98 kDa outer membrane protein	503	NO	S21 -group H	0.5728	
pCAI622	POMP90B precursor	506	NO			
pCAI327	POMP91A	577	YES	S18 -group D S45 -group F S53 -group F	S18-0.01265 S45-0.4136 S53-0.004662	
pCAI325	pmp 20; putative 98 kDa outer membrane protein	580	NO			
pCAI711	putative outer membrane protein	580	NO	S18 -group E	0.2824	
pCA60kDa	60kDa CrP; outer membrane protein; CP 004	596	YES	S5 -group E	S5-day 5-0.03175	
					S5-day 9-0.01587	
				S27 -group H	S27-0.001335	
				S43 -group J	S43-0.002664	
				S44 -group J	S44-vs S43 grp B-0.007992	
				S49 -groups J/K/L	S49-J-0.3095	
					S49-K-0.9048	
					S49-L-0.1508	
				S50 -groups F/I	S50-F-0.345	
					S50-I-0.000666	
				S54 -group J	S54-0.7546	

pCAMOMP	major outer membrane protein; in S3-used recombinant CP MOMP; in S20-used CP MOMP ISCOMs	737	YES	S1 -group D	S1-day 5-0.3929	
					S1-day 9-1.75	
				S3 -group F	S3-day 5-0.25	
					S3-day 9-0.7857	
				S16 -groups D/G/H/F	S16-D-0.2468	
					S16-G-0.1775	
					S16-H-0.6991	
					S16-F-0.1255	
				S20 -group H	S20-0.05927	
				S27 -group I	S27-0.0293	
				S31 -groups D/E/F/G/H/I	S31-D-0.04262	
					S31-E-0.001332	
					S31-F-0.5728	
					S31-G-0.8518	
					S31-H-0.1812	
					S31-I-1.427	
				S50 -groups E/I	S50-E-0.002664	
					S50-I-0.000666	
pCAI555a	76 kDa protein-alternative reading frame	776/775	YES	S51 -group F	0.01399	

pCAI419	PilG		876	NO	S10 -group E	S10-day 5-0.01587 S10-day 9-0.1111
					S45 -group E	S45-1.509
					S53 -group E	S53-0.9452
pCACPNI 879	Predicted OMP		877	NO	S37 -group E	needed to be retested and never was
pCACPNI 882	Hypothetical protein; sec. locus ORF		880	NO	S44 -group I	S44-vs S43 grp B-0.0293
					S52 -group G	S52-0.7546
					S54 -group I	S54-0.662
pCAI473	Unannotated Orf		1035	YES	S23 -group I	0.08125
pCA9kDa	9kDa CrP; CP003		597	NO	S5 -group D	day 5-0.2857 day 9-0.1905

# RAW BIOLOGIC DATA

Note:  
sample  
dilutions S1-S7 - 1:50 and 1:100, in duplicate  
S8-S57 - 1:50 and 1:100, 1:100 and 1:200

Screen #		S1	Notebook #		1837	
Date			Page #		1	

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate B Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Average IFU per lung @ 1:50	Average IFU per lung @ 1:100	Average IFU per lung	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p values (vs grp B, same day)	Immunized with
B1	5	5	20	5	15	5000	8000	6500	2400	2699.42523	na	PBS
B2	5	0	0	2	0	0	800	400				
B3	5	0	1	1	0	200	400	300				
B4	9	14	61	19	32	15000	20400	17700	7800	7052.65907	na	PBS
B5	9	2	11	2	11	2600	5200	3900				
B6	9	2	8	0	4	2000	1600	1800				
D1	5	6	49	5	4	11000	3600	7300	3460	2319.82756	0.3929	DNA CP 001
D2	5	1	8	4	2	1800	2400	2100				MOMP
D3	5	0	10	4	13	2000	6800	4400				
D4	5	4	2	7	6	1200	5200	3200				
D5	5	0	4	0	0	800	0	400				
D6	9	3	2	0	1	1000	400	700	1300	927.36185	1.75	DNA CP 001
D7	9	6	5	0	0	2200	0	1100				MOMP
D8	9	10	2	6	0	2400	2400	2400				
D9	9	0	0	0	0	0	0	0				
D10	9	21	0	1	0	4200	400	2300				

Screen #		S2	Notebook #		1837
Date			Page #		6

pCAI314												Genset SEQ ID NO 291											
Mouse ID	Day post challenge	Plate A			Plate B			Average IFU per lung @ 1:50			Average IFU per lung @ 1:100			Group mean IFU/lung			Group SD IFU/lung			Wilcoxon p value (vs grp B, same day)			Immunized with
		Inclusions per well @ 1:50	Inclusions per well @ 1:50	Inclusions per well @ 1:100	Inclusions per well @ 1:100	Inclusions per well @ 1:50	Inclusions per well @ 1:50	Inclusions per well @ 1:100	Inclusions per well @ 1:100	Average IFU per lung @ 1:50	Average IFU per lung @ 1:100	Average IFU per lung @ 1:50	Average IFU per lung @ 1:100	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p value (vs grp B, same day)	Immunized with						
B1	5	24	12	12	19	7200	12400	9800	10468.6667	2334.28562	na	na	na	na	na	na	na	na	na	na	na	saline	
B2	5	42	34	15	15	15200	12000	13800															
B3	5	14	22	8	14	7200	8600	8000															
B4	9	47	45	11	25	18400	14400	16400	17066.6667	4677.84376	na	na	na	na	na	na	na	na	na	na	na	na	saline
B5	9	18	41	8	21	11800	11600	11700															



Screen # 3	53
Date	

Page #	1837
	18

pCAI397 Genset SEQ ID NO 25

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate B Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Average IFU per lung @ 1:50	Average IFU per lung @ 1:100	Average IFU per lung	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p value (vs grp B, same day)	Immunized with
B1	5	28	34	10	15	12600	10000	11300	40900	33861.2857	na	saline
B2	5	226	183	126	106	83900	82900	86300				
B3	5	61	48	36	28	21400	24500	23100				
B4	9	26	22	16		8600	7200	8400	5056.69697	3777.41626	na	saline
B5	9	5	10	7	12	3000	7600	5300				
B6	9	39	39	17	16	15600	13200	14400				
E1	5	22	254	83	123	55200	82400	68900	44400	13801.9119	0.5714	DNA CP 017
E2	5	12	153	46	99	33000	59000	45500				Incya 387
E3	5	43	123	34	59	33200	37200	35200				
E4	5	116	99	64	47	43000	44400	43700				
E5	5	23	123	5	66	26200	26400	26900				
E6	9	56	208	55	95	52400	60000	56200	21660	16040.9091	0.3929	DNA CP 017
E7	9	42	84	3	49	25200	20900	23000				Incya 387
E8	9	6	33	12	14	7800	10400	9100				
E9	9	6	23	8	12	5900	8000	6900				
E10	9	9	68	12	20	15400	12800	14100				
F1	5	26	17	31	10	6600	16400	12500	10660	3161.3521	0.25	rec CP MOMP
F2	5	32	27	7	11	11800	7200	9500				
F3	5	9	16	5	7	5400	4900	5100				
F4	5	43	23	12	26	13200	15200	14200				
F5	5	22	30	20	14	10400	13600	12000				
F6	9	16	12	14	7	6000	8400	7200	11420	5299.56469	0.7857	rec CP MOMP
F7	9	9	11	6	6	4000	4800	4400				
F8	9	62	65	10	20	25400	12000	18700				
F9	9	48	27	11	6	15000	6800	10900				
F10	9	43	32	13	29	15000	16900	15900				

Screen #	S4
Date	

Notebook #	1837
Page #	20

pCAI394 Genset SEQ ID NO 33/35  
pCAI395 Genset SEQ ID NO 31/32  
pCAI396 Genset SEQ ID NO 28

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate B Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Average IFU per well @ 1:50	Average IFU per well @ 1:100	Average IFU per well @ 1:100	Group mean IFU/well	Group SD IFU/well	Wilcoxon p value (vs gfp B, same day)	Immunized with
B1	5	52	39	15	12	18200	10800	14500	21600	17592.2331	na	saline
B2	5	144	102	39	67	49200	42400	45800				
B3	5	12	7	2	11	3800	5200	4500				
B4	9	36	45	28	25	16200	21200	19700	11486.6967	5134.41547	na	saline
B5	9	20	19	8	9	7000	6800	7300				
B6	9	12	28	9	13	6000	8600	8400				
D1	5	102	85	52	43	37400	36000	37700	27690	11345.5895	0.5714	DNA CP 012
D2	5	65	51	28	28	23200	22400	22800				Incyle 394
D3	5	52	45	7	17	19400	9600	14500				
D4	5	26	52	29	16	15600	16800	17200				
D5	5	89	106	75	43	39000	47200	43100				
D6	9	56	26	34	12	16400	16400	17400	9080	5251.81673	1.429	DNA CP 012
D7	9	44	32	13	9	15200	8600	12000				Incyle 394
D8	9	13	6	4	4	3800	3200	3500				
D9	9	17	14	2	1	6200	1200	3700				
D10	9	23	29	11	7	10400	7200	8900				
E1	5	44	42	22	29	17200	20400	18900	21640	15246.7344	0.7857	DNA CP 013
E2	5	45	43	7	13	17600	8000	12800				Incyle 395
E3	5	14	11	8	6	5000	6400	5700				
E4	5	47	55	26	26	20400	20800	20600				
E5	5	122	121	60	70	48600	52000	50300				
E6	9	41	72	44	56	22600	40000	31300	18220	17153.2369	1.214	DNA CP 013
E7	9	1	0	1	1	200	800	500				Incyle 395
E8	9	115	118	58	53	46200	44400	45300				
E9	9	12	13	10	9	5000	7600	6300				
E10	9	16	17	13	9	6600	8800	7700				
F1	5	12	1	5	10	2800	6000	4300	9540	3928.11768	1.75	DNA CP 014
F2	5	34	39	10	20	14600	12000	13300				Incyle 396
F3	5	32	31	11	12	12600	9200	10800				
F4	5	20	5	7	8	5000	6000	5500				
F5	5	41	34	15	16	15000	12400	13700				
F6	9	23	26	18	15	9800	13200	11500	4400	3659.9616	1.75	DNA CP 014
F7	9	8	5	1	6	2600	2600	2700				Incyle 396
F8	9	12	10	3	4	4400	2600	3600				
F9	9	5	5	0	0	2000	0	1000				





Screen #		S5	Notebook #		1837	Page #		24	pCA9kDa		Genset SEQ ID NO 597	pCA60kDa		Genset SEQ ID NO 596
Date														
Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate B Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Average (IU) per lung @ 1:50	Average (IU) per lung @ 1:100	Average (IU) per lung	Group mean (IU/lung)	Group SD (IU/lung)	Wilcoxon p value (vs group B, same day)	Immunized with		
B1	5	0	4	2	5	800	2800	1800	1880	331.058007	na	saline		
B2	5	3	3	1	2	1200	1200	1200						
B3	5	5	2	4	3	1400	2800	2100						
B4	5	6	5	3	1	2200	1800	1900						
B5	5	7	3	2	0	2000	800	1400						
B6	9	3	0	1	3	600	1800	1100	4320	4139.75545	na	saline		
B7	9	10	1	5	0	2200	2000	2100						
B8	9	33	19	26	10	10400	14400	12400						
B9	9	7	8	8	4	3000	4800	3800						
B10	9	5	8	4	0	2600	1800	2100						
D1	5	10	6	7	4	3200	4400	3800	5000	3738.85238	0.2857	DNA CP 003		
D2	5	5	2	3	5	1400	3200	2300				CPCRMP 9 KD		
D3	5	21	27	22	11	9800	13200	11400						
D4	5	8	5	2	5	2200	2800	2500						
D5	9	3	6	4	2	1800	2400	2100	1400	913.783344	0.1805	DNA CP 003		
D6	9	4	0	0	0	800	0	400				CPCRMP 9 KD		
D7	9	3	1	1	0	800	400	600						
D8	9	8	3	3	4	2200	2800	2500						
E1	5	0	0	1	0	0	400	200	525	471.036092	0.03175	DNA CP 004		
E2	5	1	0	0	0	200	0	100				CPCRMP 60 KD		
E3	5	1	4	0	0	1000	0	500						
E4	5	4	3	3	0	1400	1200	1300						
E5	9	1	0	0	1	200	400	300	125	129.903811	0.01587	DNA CP 004		
E6	9	0	0	0	0	0	0	0				CPCRMP 60 KD		
E7	9	0	0	0	1	0	400	200						
E8	9	0	0	0	0	0	0	0						

Screen #		S7	Notebook #		1837	Page #		35	pCAI111		Genset SEQ ID NO 314	pCAI369		Genset SEQ ID NO 470
Date			Notebook #		1837	Page #		35						

nc = not counted (due to background)  
 There were problems with background. Therefore counting of inclusions was very difficult.  
 Only day 9 samples were counted at 1:100 dilution. Where count of 1:100 dilution was low, count of 1:50 dilution was made.

Mouse ID	Day post challenge	Rate A Inclusions per well @ 1:50	Rate B Inclusions per well @ 1:50	Rate A Inclusions per well @ 1:100	Rate B Inclusions per well @ 1:100	Average IFU per lung @ 1:50	Average IFU per lung @ 1:100	Average IFU per lung	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p value 0P B same day	Immunized with
B6	9	nc	nc	121	163		121600	121600	57380	44186.038	na	saline
B7	9	nc	nc	83	112		82000	82000				
B8	9	13	16	4	3	5800	2800	4300				
B9	9	30	38	9	15	13200	8600	11400				
B10	9	nc	nc	85	84		87600	87600				
D5	9	nc	nc	119	185		125600	125600	88700	16275.5134	0.7302	DNA CP 015
D6	9	nc	nc	94	115		83600	83600				CPN100111
D7	9	nc	nc	121	132		101200	101200				
D8	9	nc	nc	98	122		88400	88400				
F5	9	18	41	4	21	11800	10000	10900	61025	29555.5727	0.9048	DNA CP 031
F6	9	nc	nc	87	101		75200	75200				CPN100639
F7	9	nc	nc	86	91		70800	70800				
F8	9	nc	nc	105	113		87200	87200				

Screen #	S8
Date	

Page #	1837
Page #	42

pCA1877 Genset SEQ ID NO 15

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:200	Average IFU per lung @ 1:50	Average IFU per lung @ 1:100	Average IFU per lung @ 1:200	Average IFU per lung	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p value vs grp B, same day	Immunized with
B1	5	229	135	143	71	91600	111200	113600	106600	186720	88320.1973	na	saline
B2	5	365	190	170	88	146000	144000	140600	143700				
B3	5	510	353	379	160	204000	262000	259000	261400				
B4	5	719	438	358	148	287600	317600	238900	289600				
B5	5	479	261	262	98	191600	209200	158600	191700				
B6	9	132	69	75	20	52800	57600	32000	50000	137280	132556.228	na	saline
B7	9	151	83	71	27	60400	53600	43200	52700				
B8	9	155	75	84	22	62000	63600	35200	56100				
B9	9	373	113	211	78	149200	126600	121600	132500				
B10	9	1089	425	580	213	435600	402000	340800	395100				
E1	5	463	242	240	132	185200	192900	211200	195500	337950	100397.944	0.7302	DNA CP 036
E2	5	1210	689	509	269	484000	476200	430400	466200				CPN100877
E3	5	830	331	345	157	332000	270400	251200	281000				
E4	5	1041	647	450	209	416400	438800	334400	407100				
E5	9	2446	1323	1590	915	979200	1165200	1464000	1193400	633925	517281.124	0.8048	
E6	9	2758	1495	1379	661	1103200	1125600	1057600	1103000				
E7	9	140	68	66	35	56000	54000	55000	55000				
E8	9	513	237	234	97	205200	189400	155200	184300				

Screen #	S9
Date	

Notebook #	1837
Page #	48

pCAI628 Genset SEQ ID NO 500  
pCAI634 Genset SEQ ID NO 478  
pCAI640 Genset SEQ ID NO 468

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:200	Average IFU per lung @ 1:50	Average IFU per lung @ 1:100	Average IFU per lung @ 1:200	Average IFU per lung	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon P value (vs grp B, same day)	Immunized with
B1	5	2054	1238	1168	619	821800	982400	880400	924200	685240	255080.862	na	saline
B2	5	1804	844	760	364	641600	630400	638800					
B3	5	452	301	327	140	160600	251200	224000	226500				
B4	5	2082	1182	1083	619	832800	908000	960400	908800				
B5	5	1870	969	872	366	768000	748400	585600	717600				
B6	9	1168	577	563	368	478400	456000	585600	494000	238080	138450.158	na	saline
B7	9	491	203	246	104	198400	178600	169400	195500				
B8	9	704	234	311	165	281600	218000	264000	245400				
B9	9	467	212	241	93	189800	181200	146800	174500				
B10	9	292	134	98	51	118600	92800	81600	96000				
E1	5	1069	605	605	309	427600	484000	494400	472500	568675	322172.808	0.5558	DNA pCAI 628
E2	5	1126	577	633	338	450400	484000	540800	489600				
E3	5	2364	1210	1337	872	845600	1018000	1382000	1094000				
E4	5	534	325	231	133	213600	222400	212800	217600				
E5	9	DEAD	DEAD	DEAD	DEAD	DEAD	DEAD	DEAD	DEAD	148733.333	6003.5749	0.25	DNA pCAI 628
E6	9	392	197	152	87	158800	136000	139200	143600				
E7	9	381	208	191	83	152400	159600	148800	155100				
E8	9	439	197	148	71	175600	136000	113600	141300				
F1	5	2800	1580	1548	802	1120000	1252000	1283200	1226400	468300	448115.571	0.4127	DNA pCAI 634
F2	5	537	220	270	129	214800	196000	209400	203300				
F3	5	245	107	115	60	98000	88800	96000	92800				
F4	5	650	454	418	273	260000	348800	436800	348800				
F5	9	457	184	155	96	182800	159600	153600	151600	354650	245802.608	1.27	DNA pCAI 634
F6	9	187	78	117	39	66800	77200	62400	70900				
F7	9	1168	605	830	408	487200	574000	652800	587000				
F8	9	1252	732	830	478	508800	824800	794800	628800				
G1	5	393	191	162	83	157200	141200	132800	143100	189775	39538.466	0.03175	DNA pCAI 640
G2	5	592	289	217	111	238800	202400	177600	204800				
G3	5	572	288	177	117	228800	185200	167200	198600				
G4	5	672	333	250	177	269800	233200	263200	254600				
G5	9	1897	507	441	186	438800	376200	297600	373700	373100	50588.388	0.9048	DNA pCAI 640
G6	9	748	422	398	131	288400	328600	209600	291000				
G7	9	1897	507	523	222	438800	412000	355200	404500				
G8	9	1238	581	532	187	495200	446200	268200	423200				

Screen #	S10
Date	

Notebook #	1837
Page #	56

pCAI115      Genset SEQ ID NO 305  
 pCAI419      Genset SEQ ID NO 876  
 pCAI630      Genset SEQ ID NO 485  
 pCAI632      Genset SEQ ID NO 480/482

Note: samples tested at 1:100, 1:200, 1:200 and 1:400 in this screen

\*\* This sample was tested at 1:50, 1:100, 1:100 and 1:200. These dilutions were factored into the calculation for Average IFU/lung for G1.

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:100	Plate A Inclusions per well @ 1:200	Plate B Inclusions per well @ 1:200	Plate B Inclusions per well @ 1:400	Average IFU per lung @ 1:100	Average IFU per lung @ 1:200	Average IFU per lung @ 1:400	Average IFU per lung @ 1:200	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p value (vs grp B, same day)	Immunized with
B1	5	381	216	176	144	304800	313900	460800	348200	428800	238600.267	na	saline
B2	5	238	105	122	80	190400	181600	258000	202400				
B3	5	480	278	242	148	384000	416000	473600	422400				
B4	5	364	180	201	80	281200	304800	296000	288200				
B5	5	1112	563	574	262	889600	906600	838400	886500				
B6	9	81	38	57	19	64800	74400	60800	68600	157080	83783.3869	na	saline
B7	9	387	175	205	74	203600	304000	236800	284600				
B8	9	138	70	110	41	108800	144000	131200	132000				
B9	9	100	30	66	25	80000	76900	80000	78400				
B10	9	257	118	169	69	205600	230400	220800	221800				
D1	5	168	84	94	29	134400	142400	92800	126000	137750	78808.1758	0.03175	DNA pCAI 115
D2	5	342	177	168	70	273600	276000	224000	262400				
D3	5	157	58	73	29	125600	104800	92800	107000				
D4	5	82	40	37	13	48600	61600	41600	53600				
D5	9	331	176	143	63	264800	255200	201600	244200	133550	68781.341	0.8048	DNA pCAI 115
D6	9	98	51	56	17	76800	86800	54400	75600				
D7	9	165	71	82	42	132000	122400	134400	127800				
D8	9	123	62	57	18	98400	95200	57600	66600				
E1	5	298	139	82	51	238400	176800	163200	188800	118100	68372.2597	0.01587	DNA pCAI 419
E2	5	82	48	49	18	73600	77600	57600	71600				
E3	5	269	104	138	41	212800	193600	131200	162800				
E4	5	42	21	21	5	33600	33600	16000	26200				
E5	9	4	2	4	2	3200	4800	6400	4800	63150	42762.6862	0.1111	DNA pCAI 419
E6	9	71	25	37	16	56800	48800	51200	51800				
E7	9	128	72	100	37	102400	137800	118400	124000				
E8	9	80	28	64	24	64000	73600	76800	72000				
F1	5	208	125	126	68	194800	200800	217600	196000	165550	129305.781	0.1111	DNA pCAI 630
F2	5	481	247	278	125	384800	420000	400000	406200				
F3	5	147	49	65	32	117600	91200	102400	100600				
F4	5	109	43	49	28	87200	73600	63200	78400				
F5	9	173	60	57	17	136400	93600	54400	96000	98150	77620.3821	0.4127	DNA pCAI 630
F6	9	304	111	152	76	243200	210400	243200	226800				

F7	9	83	30	39	8	69400	55200	25600	50600				
F8	9	31	10	19	8	24800	23200	25600	24200				
G1**	5	429	275	163	77	171600	175200	123200	181300	124025	330008.5122	0.01587	DNA pCA1 632
G2	5	153	72	65	29	122400	109600	92800	108600				
G3	5	212	128	91	23	169800	175200	73800	148400				
G4	5	87	40	78	16	89600	95200	51200	77600				
G5	9	124	48	33	12	98200	83200	39400	96000	122450	43813.3867	0.5556	DNA pCA1 632
G6	9	274	118	120	46	216200	190400	153600	188400				
G7	9	168	67	74	30	134400	112800	96000	114000				
G8	9	209	65	56	38	197200	86400	121600	121400				

Screen #	S16
Date	

Notebook #	1837
Page #	91

PCAIMOMP Genset SEQ ID NO 737

Important Note:

An error was made in Group B, where the mice were challenged with saline instead with C.p. In order to calculate Wilcoxon p values, use Group B values from Screen 14, as date of study and IFU values are similar. S14 values are in RED.

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:200	Average IFU per lung @ 1:50	Average IFU per lung @ 1:100	Average IFU per lung @ 1:200	Average IFU per lung	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p value (vs S14 grp B)	Immunized with
B1	9	0	0	0	0	0	0	0	0	0	0	Screen 14	saline
B2	9	0	0	0	0	0	0	0	0	0		Ave IFU/lung values:	no challenge
B3	9	0	0	0	0	0	0	0	0	0			
B4	9	0	0	0	0	0	0	0	0	0		53500	
												331600	
												235900	
												15000	
												101900	
D1	9	18	10	6	2	7200	6400	3200	5600	12600	6876.60406	0.2488	DNA pCAI MOMP
D2	9	108	38	34	14	42400	26000	22400	30200				
D3	9	37	11	10	5	14800	8400	8000	8900				
D4	9	63	32	16	2	33200	19200	3200	18700				
D5	9	0	0	0	0	0	0	0	0				
D6	9	42	13	15	3	16800	11200	4800	11000				
F1	9	14	8	10	4	5600	7200	6400	6600	3950	2157.73801	0.1255	DNA pCAI MOMP
F2	9	15	7	6	3	6000	5200	4600	5300				+ 78kD
F3	9	0	0	0	0	0	0	0	0				
F4	9	13	7	3	0	5200	4000	0	3300				
F5	9	18	7	4	3	7200	4400	4800	5200				
F6	9	13	2	3	1	5200	2000	1600	2700				
G1	9	16	11	3	1	6400	5600	1600	4800	7666.66667	5195.08315	0.1775	DNA pCAI MOMP
G2	9	42	24	16	5	16800	16000	8000	14200				+ MOMP ISCOMs
G3	9	16	11	8	1	6400	7600	1800	5600				
G4	9	57	28	11	4	22800	15600	8400	15100				
G5	9	37	8	5	3	14800	5200	4800	7500				
G6	9	2	1	0	0	800	400	0	400				
H1	9	379	188	111	75	151600	111800	120000	123700	62266.6667	31806.7217	0.6991	DNA pCAI MOMP
H2	9	148	98	77	34	59200	66200	54400	63000			vs grp I	challenge with
H3	9	56	22	20	14	22400	16800	22400	19600				CWL 029
H4	9	124	79	69	31	49600	56200	49600	54400				
H5	9	132	58	57	16	52800	46800	25600	42600				
H6	9	215	109	93	21	89000	80900	33600	70300				
I1	9	98	49	39	30	39400	35200	48000	39200	56566.6667	20404.7825	na	PBS
I2	9	96	48	37	24	34400	33200	39400	34800				challenge with

I3	9	169	83	80	41	75600	65200	65600	67900		CWL 029
I4	9	200	111	131	68	80000	96800	108900	95600		
I5	9	116	53	60	37	46400	45200	50200	46600		
I6	9	151	77	66	23	60400	57200	36900	52900		



Screen #

S17

Date

1837

99

pCAI114

pCAI368

Genset SEQ ID NO 304

Genset SEQ ID NO 466

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate B Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:200	Average IFU per lung @ 1:50	Average IFU per lung @ 1:100	Average IFU per lung @ 1:200	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p value (vs grp B)	Immunized with
B1	9	3	2	2	1200	1200	3200	39825	33263.835	na	saline
B2	9	96	44	23	39400	34800	36800	36200			
B3	9	275	124	56	110000	112400	89600	103100			
B4	9	91	42	38	31200	31200	35200	33500			
B5	9	188	77	68	76200	66000	70400	70400			
B6	9	115	60	33	46000	48000	52800	48700			
B7	9	0	1	0	0	400	1600	600			
B8	9	54	23	17	21800	19300	25600	19800			
D1	9	12	6	3	4800	3600	3200	3500	30968.6687	0.7546	DNA pCAI 114
D2	9	13	2	5	5200	2800	3200	3500			
D3	9	273	121	138	106200	102600	97600	103100			
D4	9	101	56	43	40400	39600	40000	39900			
D5	9	43	19	12	17200	12400	12800	13700			
D6	9	74	27	21	26800	19200	18200	21800			
I1	9	42	13	28	18800	16400	20800	17600	37360.3608	1.455	DNA pCAI 368
I2	9	304	123	151	121800	109600	100800	110400			
I3	9	291	122	141	116400	105200	112000	106700			
I4	9	68	31	37	26400	27200	24000	26200			
I5	9	119	55	80	47600	54000	70400	66500			
I6	9	135	40	45	54000	34000	36800	30700			

1837

107

pCAI327

pCAI711

Genset SEQ ID NO 577

Genset SEQ ID NO 580

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate B Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:200	Average IFU per lung @ 1:50	Average IFU per lung @ 1:100	Average IFU per lung @ 1:200	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p value (vs grp B)	Immunized with
B1	9	65	29	44	26000	29200	33600	29500	27641.3168	na	PBS
B2	9	214	119	142	85900	104400	105900	100000			
B3	9	26	14	20	10400	13600	22400	15000			
B4	9	108	54	93	43200	59800	65900	66000			
B5	9	151	81	63	60400	65600	49800	60300			
B6	9	216	114	NA	86400	91200	NA	88800			
B7	9	60	35	41	24000	30400	36800	30400			
B8	9	185	73	67	74000	64000	75200	69300			
D1	9	81	37	36	32400	29200	32000	30700	16700	0.01285	DNA pCAI 327

D2	9	48	17	14	5	19200	12400	8000	13000			
D3	9	31	13	10	9	12400	9200	14400	11300			
D4	9	9	5	6	2	3900	4400	3200	3900			
D5	9	55	18	34	10	22000	20800	16000	19900			
D6	9	42	28	34	12	16800	24500	19200	21400			
E1	9	125	78	76	31	50000	60800	49600	55300	40700	27821.0851	0.2824
E2	9	35	21	16	8	14000	16000	12800	14700			
E3	9	62	32	46	20	32600	31200	32000	31800			
E4	9	284	115	121	56	105600	94400	89800	96000			
E5	9	50	28	45	14	20000	28400	22400	24800			
E6	9	66	28	33	7	26400	24400	11200	21600			

DNA PCA 711

Screen #	S20	Notebook #	1837
Date		Page #	128

**pCAIMOMP      Genset SEQ ID NO 737**

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:200	Average IFU per lung @ 1:50	Average IFU per lung @ 1:100	Average IFU per lung @ 1:200	Average IFU per lung	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p value (vs grp B)	Immunized with
B1	9	73	29	42	17	29200	28400	27200	28300	134387.5	142221.222	na	PBS
B2	9	1110	528	689	311	444000	486800	497600	478900				
B3	9	515	234	275	120	206000	203600	192000	201300				
B4	9	338	159	178	81	135200	134800	129600	133600				
B5	9	53	27	37	14	21200	25600	22400	23700				
B6	9	83	51	43	22	33200	37600	35200	35900				
B7	9	236	130	152	72	94400	112900	115200	108600				
B8	9	165	78	81	42	66000	62600	67200	64700				
H1	9	206	78	110	47	82400	75200	75200	77000	34116.6867	25930.2418	0.05927	CP MOMP iSCOMs
H2	9	60	45	45	13	24000	36000	20800	28200				
H3	9	13	3	16	4	5200	7600	6400	6700				
H4	9	182	77	88	28	64800	66000	44800	60400				
H5	9	48	21	26	12	19400	18000	19200	18600				
H6	9	40	11	16	7	16000	11600	11200	12600				

Screen #	S21	Notebook #	1837
Date		Page #	135

**pCAI624      Genset SEQ ID NO 503**

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:200	Average IFU per lung @ 1:50	Average IFU per lung @ 1:100	Average IFU per lung @ 1:200	Average IFU per lung	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p value (vs grp B)	Immunized with
B1	9	172	75	95	44	68800	68000	70400	69800	76675	37856.7813	na	PBS
B2	9	48	13	18	18	18200	12400	28800	18200				
B3	9	163	77	71	34	65200	56200	54400	58500				
B4	9	93	62	56	22	37200	47200	35200	41700				
B5	9	206	108	116	55	82400	68600	68000	67000				
B6	9	184	91	92	50	73600	73200	80000	75000				
B7	9	301	148	158	69	120400	122400	110400	118500				
B8	9	435	176	180	73	174000	143200	118800	144300				
H1	9	180	101	86	37	72000	74800	59200	70200	134600	72888.9263	0.5728	DNA pCAI 624
H2	9	531	255	256	128	212400	204400	204800	206500				
H3	9	201	97	123	32	80400	88000	51200	78900				
H4	9	527	241	268	113	250800	203600	180600	206700				
H5	9	94	38	61	30	37600	39600	46000	41200				
H6	9	569	237	274	110	227600	204400	178000	203100				

Screen #	S23	Notebook #	1837
----------	-----	------------	------

**pCAI473      Genset SEQ ID NO 1035**

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:200	Average IFU per lung @ 1:50	Average IFU per lung @ 1:100	Average IFU per lung @ 1:200	Average IFU per lung	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p value (vs grp B)	Immunized with
B1	9	194	118	109	63	77600	90900	100800	90000	141787.5	128234.762	na	PBS
B2	9	156	86	104	40	62400	76000	64000	69600				
B3	9	268	155	162	88	118200	134800	159800	139400				
B4	9	981	582	618	305	384400	480000	488000	458100				
B5	9	367	179	222	124	148800	160400	198400	166500				
B6	9	145	79	60	18	59000	55000	28800	46500				
B7	9	32	21	11	10	12900	12900	16000	13600				
B8	9	356	218	193	83	142400	183600	132800	150600				
I1	9	83	42	60	19	33200	40900	30400	36300	50333.3333	18202.2587	0.08125	DNA pCAI 473
I2	9	78	66	66	22	31200	52900	35200	43000				
I3	9	159	65	80	33	63600	58000	52800	58100				
I4	9	180	65	90	33	72000	62000	52800	62200				
I5	9	75	28	32	10	30000	24000	18000	23500				
I6	9	215	77	122	44	86000	78600	70400	78900				

Screen #	527
Date	

Notebook #	1837
Page #	181

pCA60kDa Genset SEQ ID NO 596  
pCAIMOMP Genset SEQ ID NO 737

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Average IFU per well @ 1:50	Average IFU per well @ 1:100	Average IFU per well @ 1:200	Average IFU per well @ 1:500	Average IFU per well @ 1:1000	Group mean IFU/ing	Group SD IFU/ing	Wilcoxon p value (vs grp B)	Immunize with
B1	9	210	140	133	72	84000	106200	115200	104400	74282.5	44432.7263	na	PBS
B2	9	71	30	58	23	28400	35200	36800	33800				
B3	9	165	136	116	70	78000	100800	112000	97800				
B4	9	77	50	54	30	30800	41800	48000	40500				
B5	9	378	225	202	102	151200	170800	163200	164000				
B6	9	154	89	82	34	61600	71200	54400	63200				
B7	9	201	106	76	44	80400	72800	70400	74100				
B8	9	43	28	19	7	17200	18000	11200	16100				
H1	9	12	6	3	4	4800	4400	6400	5000	8863.33333	5473.69974	0.001332	DNA pCA CRMP 60K
H2	9	45	23	24	12	18000	18800	19200	18700				
H3	9	20	10	7	4	8000	6800	6400	7000				
H4	9	32	23	6	7	12800	11600	11200	11800				
H5	9	28	12	11	5	11200	9200	8000	9400				
H6	9	4	2	1	1	1800	1200	1800	1400				
I1	9	55	28	17	12	22000	17200	19200	18800	25850	10914.3254	0.0283	DNA pCA MOMP
I2	9	86	37	40	18	34400	30600	28800	31200				
I3	9	49	27	22	10	19600	18600	16000	18700				
I4	9	38	13	15	5	15200	11200	8000	11400				
I5	9	145	47	50	28	58000	38600	44800	45100				
I6	9	70	42	32	17	28000	28600	27200	28600				



H8	9	111	41	49	22	44400	36000	35200	37900								
I1	9	54	30	28	18	21800	23200	28800	24200	70166.6667	33338.0967	1.427					DNA-pCAI-MOMP
I2	9	112	59	44	24	44800	40600	39400	41200								+ 78 kD
I3	9	277	122	137	51	110800	103800	81800	99800								IN only
I4	9	326	152	158	71	130400	124000	113600	123000								
I5	9	170	87	94	39	68000	72400	62400	68800								
I6	9	207	71	81	27	82800	84800	43200	63800								

Screen #	S32	1941	1941
Date		Page #	16

pCABK319 Genset SEQ ID NO 315

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:200	Average IFU per lung @ 1:50	Average IFU per lung @ @ 1:100	Average IFU per lung @ 1:200	Average IFU per lung	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p value (vs grp B)	Immunized with
B1	9	141	91	72	50	59400	65200	80000	68700	61887.5	29684.8124	na	PBS
B2	9	148	108	68	43	59200	69600	68800	69800				
B3	9	134	85	65	38	53600	52000	57600	53800				
B4	9	91	55	49	22	38400	41800	35200	38700				
B5	9	324	172	151	75	129600	129200	120000	127000				
B6	9	54	31	40	21	21600	24500	33900	28000				
B7	9	80	47	61	14	32000	43200	22400	35200				
B8	9	173	103	89	53	68200	60500	84800	78900				
H1	9	83	54	35	27	37200	35500	43200	37900	26916.6667	16054.2224	0.04262	DNA pCABK 319
H2	9	35	17	13	7	14000	12000	11200	12300				
H3	9	102	45	52	27	40800	38600	43200	40400				
H4	9	0	0	0	0	0	0	0	0				
H5	9	118	58	54	28	46400	44800	41600	44400				
H6	9	89	30	40	14	27600	28000	22400	26500				

Screen #	S34	1941	1941
Date		Page #	30

pCACPMM200 Genset SEQ ID NO 201

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:200	Average IFU per lung @ 1:50	Average IFU per lung @ @ 1:100	Average IFU per lung @ 1:200	Average IFU per lung	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p values (vs grp B)	Immunized with
B1	9	432	231	229	128	172800	184000	204800	186400	141587.5	84314.2253	na	PBS
B2	9	422	210	222	109	168800	172800	174400	172200				
B3	9	128	65	76	42	51600	56400	67200	57600				
B4	9	678	348	424	233	270400	308800	372800	315200				
B5	9	312	148	159	76	124800	123200	121600	123200				
B6	9	130	67	64	38	52000	53600	57600	53800				
B7	9	407	218	207	113	162800	170400	180800	171100				
B8	9	125	78	63	32	50000	55600	51200	53100				
D2	9	128	63	77	38	51600	59000	57600	55300	76180	78030.7734	0.2844	DNA pCACPMM 200
D3	9	550	213	262	172	220000	202000	275200	224800				
D4	9	80	31	37	18	24000	27200	25900	28000				
D5	9	10	4	3	1	4000	2800	1800	2800				
D6	9	182	88	89	41	72800	74500	69600	72000				
D1	9	0	0	0	0	0	0	0	0	omitted from calculations			

Screen #	S38	1941	1941
Date		Page #	

pCAI635 Genset SEQ ID NO 477



Date	
------	--

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:200	Average IFU per lung @ 1:50	Average IFU per lung @1:100	Average IFU per lung @ 1:200	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p value (vs grp B)	Immunized with
B1	9	365	189	206	108	146000	156000	172000	164537.5	70742.6134	na	PBS
B2	9	840	345	259	137	256000	241600	216200				
B3	9	364	220	229	109	145900	179600	174400				
B4	9	427	175	193	118	170600	147200	188900				
B5	9	271	151	113	77	109400	105900	123200				
B6	9	288	142	109	71	115200	113600	107400				
B7	9	797	391	377	188	318600	307200	268800				
B8	9	177	80	98	47	70600	59200	75200				
11	9	275	137	157	92	110000	117600	147200	66769.6867	44324.36	0.01986	DNA pC4.635
12	9	128	51	66	38	51200	54900	60800				
13	9	126	68	66	31	50400	54100	49600				
14	9	304	134	189	68	121800	129200	159800				
15	9	72	29	27	13	28800	34400	20800				
16	9	53	25	21	9	21200	18400	14400				

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:200	Average IFU per lung @ 1:50	Average IFU per lung @1:100	Average IFU per lung @ 1:200	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p value (vs grp B)	Immunized with
B1	9	365	189	206	108	146000	156000	172000	164537.5	70742.6134	na	PBS
B2	9	840	345	259	137	256000	241600	216200				
B3	9	364	220	229	109	145900	179600	174400				
B4	9	427	175	193	118	170600	147200	188900				
B5	9	271	151	113	77	109400	105900	123200				
B6	9	288	142	109	71	115200	113600	107400				
B7	9	797	391	377	188	318600	307200	268800				
B8	9	177	80	98	47	70600	59200	75200				
11	9	275	137	157	92	110000	117600	147200	66769.6867	44324.36	0.01986	DNA pC4.635
12	9	128	51	66	38	51200	54900	60800				
13	9	126	68	66	31	50400	54100	49600				
14	9	304	134	189	68	121800	129200	159800				
15	9	72	29	27	13	28800	34400	20800				
16	9	53	25	21	9	21200	18400	14400				





H1	9	151	53	66	37	60400	48400	56200	54100	98000	51311.0774	0.007992	DNA PCA 396
H2	9	221	93	114	63	88400	82600	100800	88700				
H3	9	160	97	66	35	64000	73200	56000	69600				
H4	9	487	255	236	144	154800	196400	230400	204500				
H5	9	188	57	93	34	75200	60000	54400	62400				
H6	9	305	112	156	69	122000	107200	110400	111700				
I1	9	246	108	127	51	99200	92200	81600	81600	174283.333	128436.384	0.2284	DNA PCAEK 319
I2	9	651	364	429	183	340400	317200	297600	318100				
I3	9	1039	435	526	219	415600	384400	350400	383700				
I4	9	148	74	81	38	56200	62000	57600	60200				
I5	9	396	131	196	63	158400	130800	100800	130200				
I6	9	167	54	63	39	88800	58800	62400	61700				

Screen #	S40
Date	

Notebook #	1941
Page #	142

pCA60kDa Genset SEQ ID NO 596

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:200	Average IFU per lung @ 1:50	Average IFU per lung @ 1:100	Average IFU per lung @ 1:200	Average IFU per lung @ 1:200	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p value (vs matched group)	Immunized with
<b>C57BL/6</b>													
D1	9	365	161	187	94	146000	13200	102400	131700	106520	61862.2218	na	PBS
D2	9	514	257	279	131	205600	214400	209800	211000				
D3	9	258	116	133	56	103200	99900	99900	99900				
D4	9	198	61	74	26	54400	54000	41600	51000				
D5	9	109	49	67	17	43600	46400	27200	40900				
<b>Balb/c</b>													
E1	9	283	135	127	58	113200	104900	92800	103900	188740	75974.0377	na	PBS
E2	9	903	413	403	190	361200	326400	304000	329500				
E3	9	511	236	241	115	204400	190900	184000	192500				
E4	9	397	209	203	105	159800	184900	169000	164100				
E5	9	389	205	193	88	155600	152200	140600	153700				
<b>Balb/c</b>													
F1	9	74	31	39	21	26800	26400	33600	28600	79390	32203.156	na	PBS
F2	9	168	111	102	53	78200	85200	84800	83800				
F3	9	223	120	109	64	89200	91500	102400	93700				
F4	9	149	84	77	40	59600	64400	84000	83100				
F5	9	329	156	163	75	131600	127600	120000	126700				
<b>C57BL/6</b>													
J1	9	33	11	16	14	13200	10600	22400	14300	56540	47740.7834	vs group D 0.3995	DNA pCA CRMP 60kD
J2	9	336	168	189	101	134400	142000	181600	145200				
J3	9	146	68	79	38	58400	58900	59200	59200				
J4	9	48	12	23	8	16200	14000	12800	15000				
J5	9	150	62	57	26	80000	47500	41600	46200				
<b>Balb/c</b>													
K2	9	1028	498	513	248	411200	404400	393600	403400	225375	136922.253	vs group E 0.9046	DNA pCA CRMP 60kD
K3	9	253	120	137	63	101200	102800	100800	101900				
K4	9	821	387	401	184	328400	315200	294400	313300				
K5	9	189	112	96	55	75600	84000	89000	82900				
K1	9	0	0	0	0	0	0	0	0	omitted from calculations			
<b>Balb/c</b>													
L1	9	23	9	22	8	8200	12400	12800	11700	34980	36831.7037	vs group F 9.1598	DNA pCA CRMP 60kD
L2	9	54	24	17	6	21600	16400	9600	16000				
L3	9	83	39	49	22	33200	35200	35200	34700				
L4	9	23	5	11	2	8200	6400	3200	6300				
L5	9	261	125	149	63	104400	106600	106600	106100				

Screen #	S50
Date	

Notebook #	1841
Page #	152

pCA60kDa Genset SEQ ID NO 596  
pCAIMOMP + pCA60kDa + pCAI764 + pCAI555a

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:200	Average IFU per lung @ 1:50	Average IFU per lung @ @1:100	Average IFU per lung @ 1:200	Average IFU per lung	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p values (vs grp B)	Immunized with
B1	9	729	370	353	198	291600	293200	313600	297000	217937.5	103234.453	na	PBS
B2	9	576	451	439	227	350400	356000	363200	356400				
B3	9	523	243	312	151	209200	222000	241600	223700				
B4	9	298	150	159	71	110600	123600	113600	120100				
B5	9	865	459	479	227	354000	375200	363200	366000				
B6	9	271	148	189	86	108400	134800	137600	126500				
B7	9	354	195	223	105	141600	167200	168000	161000				
B8	9	194	120	117	57	73600	94500	91200	86600				
F1	9	442	218	260	108	176800	191200	172800	183200	152100	79111.8617	0.345	DNA pCA CRMP 60
F2	9	136	60	76	24	54400	55600	39400	51000				
F3	9	177	63	96	38	70800	64500	60900	65300				
F4	9	514	278	340	167	245600	247200	267200	251600				
F5	9	253	149	169	78	101200	127200	126400	120500				
F6	9	596	315	320	138	238400	254000	217600	241000				
I1	9	81	38	66	25	32400	42000	40000	39100	35396.6987	15656.2731	0.000866	mixture of DNAs
I2	9	84	28	24	11	25600	20000	17600	23800				MOxP
I3	9	47	17	23	9	18800	16000	14400	16300				CRMP 60
I4	9	87	38	29	18	26900	26900	25600	26500				pCAI 764
I5	9	121	77	59	28	48400	54400	41600	49700				pCAI 555
I6	9	182	80	64	37	64800	57600	59200	59800				

Screen #	S51
Date	

Notebook #	1841
Page #	159

pCAI555a Genset SEQ ID NO 776775

exclude B1 from calculations

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:200	Average IFU per lung @ 1:50	Average IFU per lung @ @1:100	Average IFU per lung @ 1:200	Average IFU per lung	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p values (vs grp B)	Immunized with
B1	9	0	0	0	0	0	0	0	0	88600	69457.7165	na	PBS
B2	9	54	28	26	5	21600	20800	8000	17600				
B3	9	189	119	63	51	75600	60900	61600	76700				
B4	9	13	7	6	2	5200	5200	3200	4700				
B5	9	524	274	223	120	206600	196800	192000	196600				
B6	9	362	141	181	103	144800	126800	164800	141800				
B7	9	365	180	161	71	154000	136400	119600	135100				
B8	9	123	49	62	17	49200	44400	27200	41300				

F1	9	52	17	22	9	20800	15500	14400	18500	11718.6687	13132.0748	0.01399	DNA pCAI 555a
F2	9	13	1	6	0	5200	2800	0	2700				
F3	9	3	0	2	0	1200	800	0	700				
F4	9	43	17	15	5	17200	12800	8000	12700				
F5	9	0	0	0	0	0	0	0	0				
F6	9	118	47	48	17	47200	38000	27200	37600				





E1	9	1577	785	811	418	630800	838400	885600	643300	349533.333	181088.377	0.9432	DNA PCA 418
E2	9	387	143	197	90	154800	138000	144000	142700				
E3	9	1477	508	688	253	598800	481800	404800	489700				
E4	9	1085	484	*	*	498000	385200		410800				
E5	9	408	180	248	104	163200	171200	184400	188000				
E6	9	827	259	380	131	258800	255800	208800	242900				
F1	9	84	48	47	18	37690	38000	28800	35900	118468.887	68078.9448	0.004682	DNA PCA 327
F2	9	575	288	284	130	230000	220000	208000	219500				
F3	9	181	74	82	37	72400	62400	59200	64100				
F4	9	158	85	83	39	63200	58200	62400	61000				
F5	9	458	127	224	107	182400	140400	171200	158800				
F6	9	418	144	285	121	187200	183800	183800	172000				
H1	9	1450	680	720	340	500000	552000	544000	557000	243500	144052.19	0.1375	DNA PCA 632
H2	9	631	228	237	114	252400	188400	182400	201800				
H3	9	394	148	181	71	157800	132000	113800	133800				
H4	9	372	188	178	89	148800	137800	142400	141800				
H5	9	518	248	285	118	208400	205800	190400	202000				
H6	9	649	250	283	128	259800	217200	204800	224700				

Screen #	S54
Date	

Notebook #	1941
Page #	183

pCAPNM882 Genset SEQ ID NO 880  
pCA60kDa Genset SEQ ID NO 596

\* -no count-contaminated well  
\*\* -no count-well not stained

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:200	Average IFU per lung @ 1:50	Average IFU per lung @ 1:100	Average IFU per lung @ 1:200	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p value (vs grp B)	Immunized with
B1	9	239	127	107	57	95600	93900	91200	220150	153871.24	na	PBS
B2	9	1560	730	881	378	824000	594000	801800	588900			
B3	9	223	109	101	53	86200	83900	84900	85300			
B4	9	391	184	238	97	156400	172900	155200	184300			
B5	9	329	161	174	83	131600	134000	148800	137100			
B6	9	529	259	261	135	211600	207800	218000	210700			
B7	9	744	333	397	209	297800	282000	334400	304900			
B8	9	469	217	221	108	187600	175200	172800	177700			
I1	9	648	202	287	108	258400	189900	169800	208900	164118.867	0.482	DNA pCAPNM 882
I2	9	*	345	321	187	n/a	269400	299200	282900			
I3	9	391	189	189	85	159400	143200	138000	144700			
I4	9	459	182	227	88	183800	183600	158800	168900			
I5	9	169	60	78	31	67600	55200	49800	59800			
I6	9	398	136	185	67	158400	120400	107200	128900			
J1	9	343	180	219	81	137200	183800	129600	148500	72712.8829	0.7548	DNA pCA CRMP 90 kD
J2	9	478	271	221	117	191200	188800	187200	193000			
J3	9	605	333	306	190	242000	255600	304000	284300			
J4	9	465	284	250	136	189000	205600	217600	203700			
J5	9	269	**	207	75	107600	165600	120000	98300			
J6	9	144	**	80	29	57600	94000	49400	42000			

Screen	56
Date	

Notebook #	1941
Page #	194

pCAI640 Genset SEQ ID NO 488  
pCAI115 Genset SEQ ID NO 305

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:200	Average IFU per lung @ 1:50	Average IFU per lung @ 1:100	Average IFU per lung @ 1:200	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p value (vs B group)	Immunized with
B1	9	207	124	101	56	82800	90000	89600	88100	151443.372	na	PBS
B2	9	717	414	286	139	298800	280000	222400	287300			
B3	9	217	103	90	49	86600	77200	78400	76900			
B4	9	1373	704	675	328	549200	551600	526400	544700			
B5	9	664	308	371	168	285600	278800	265600	286200			
B6	9	745	450	379	186	289000	331800	297600	314700			
B7	9	260	185	118	56	104000	113200	89600	105000			
B8	9	227	148	127	58	98800	106200	82800	100500			

F1	0	567	432	416	188	362800	336200	300800	340500	302300	183124.131	1.685	DNA pCAI 640
F2	0	2153	915	791	353	861200	682400	594800	697700				
F3	0	601	330	332	159	240400	264800	254100	256100				
F4	0	359	181	189	89	143600	140000	159400	145500				
F5	0	280	140	147	80	104000	114800	86000	107400				
F6	0	702	312	378	147	260800	275200	235200	266800				
G1	0	343	128	155	131	137200	113200	209600	143500	264450	183257.584	1.338	DNA pCAI 638
G2	0	519	245	228	138	207600	189200	217600	200900				
G3	0	1548	888	769	359	818200	682000	574400	628400				
G4	0	177	80	71	35	70600	60400	56000	61900				
G5	0	787	383	506	219	314800	347600	350400	340100				
G6	0	481	213	408	97	192400	248400	155200	211100				
K1	0	223	118	136	56	89200	101600	105600	96500	157098.697	148263.309	0.4138	DNA pCAI 115
K2	0	1088	578	832	323	435200	483200	516800	479500				
K3	0	91	59	50	33	38400	43600	52800	44100				
K4	0	301	200	205	104	120400	182000	188400	152700				
K5	0	281	142	155	78	116400	118900	124800	119700				
K6	0	118	63	57	28	46400	48000	44800	46800				

Genset SEQ ID NO 477

pCAI635

Screen	57
Date	

Screen	57
Date	

Mouse ID	Day post challenge	Plate A Inclusions per well @ 1:50	Plate A Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:100	Plate B Inclusions per well @ 1:200	Average IFU per lung @ 1:50	Average IFU per lung @ 1:100	Average IFU per lung @ 1:200	Average IFU per lung	Group mean IFU/lung	Group SD IFU/lung	Wilcoxon p value (vs grp B)	Immunized with
B1	0	408	185	180	69	162400	136000	110400	137200	253325	235965.845	na	PBS
B2	0	319	128	129	51	127800	103200	81600	103900				
B3	0	585	284	270	103	234000	221600	164800	210500				
B4	0	900	278	279	105	240000	222800	168000	213400				
B5	0	368	190	199	79	155200	155600	126400	148200				
B6	0	201	102	130	54	80400	92800	86400	88100				
B7	0	2322	915	1069	577	928800	793600	923200	859800				
B8	0	616	334	350	167	247600	273600	267200	265500				
G1	0	277	119	134	72	110800	100800	115200	106900	85798.6867	61578.7211	0.09827	DNA pCAI pNA 635
G2	0	386	157	191	75	154400	138200	120000	136200				
G3	0	491	190	230	118	198400	168000	185600	179500				
G4	0	176	62	75	38	70400	54800	60800	60200				
G5	0	19	8	11	8	7600	7600	12800	8900				
G6	0	45	28	26	15	18000	20900	24000	20900				



## Sequence Revision History

[PubMed](#) [Nucleotide](#) [Protein](#) [Genome](#) [Structure](#) [PMC](#) [Taxonomy](#) [OM](#)

**Find** (*Accessions, GI numbers or Fasta style Seqlds*)

About Entrez

Show

difference between I and II as

Entrez

### Revision history for AE001619

Search for  
[Genes](#)

[LocusLink](#)

[provides curated  
information for  
human, fruit fly,  
mouse, rat, and  
zebrafish](#)

GI	Version	Update Date	Status	I	II
4376620	1	<a href="#">Dec 1 2000 9:38</a>	Live	<input checked="" type="radio"/>	<input type="radio"/>
4376620	1	<a href="#">Oct 30 2000 12:09</a>	Dead	<input type="radio"/>	<input checked="" type="radio"/>
4376620	1	<a href="#">Mar 8 1999 5:32</a>	Dead	<input type="radio"/>	<input type="radio"/>

Accession AE001619 was first seen at NCBI on Mar 8 1999 5:32

[Help|FAQ](#)

Batch Entrez:  
Upload a file of  
GI or accession  
numbers to  
retrieve [protein](#)  
or [nucleotide](#)  
sequences

[Check sequence  
revision history](#)

[How to create  
WWW links to  
Entrez](#)

[LinkOut](#)

[Cubby](#)

[Related  
resources](#)

[BLAST](#)

[Reference  
sequence project](#)

[LocusLink](#)

[Clusters of  
orthologous  
groups](#)

Protein reviews  
on the web

[Disclaimer](#) | [Write to the Help Desk](#)  
[NCBI](#) | [NLM](#) | [NIH](#)